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10/673,383	09/26/2003	Bharat T. Doshi	Doshi 57-6-22-18-34	8402
46850 7590 02/26/2009 MENDELSON & ASSOCIATES, P.C. 1500 JOHN F. KENNEDY BLVD., SUITE 405 PHILADELPHIA, PA 19102				
EXAMINER				
BATES, KEVIN T				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/673,383

**Applicant(s)**

DOSHI ET AL.

**Examiner**

KEVIN BATES

**Art Unit**

2456

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 4-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/CDC)
- Paper No(s)/Mail Date 11-4-08

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

***Response to Amendment***

This Office Action is in response to a communication made on December 3, 2008.

The Information Disclosure Statement filed November 4, 2008 has been considered.

Claims 1, 4-7, 11, and 18 are currently amended.

Claims 19-21 have been newly added.

Claims 1 and 4-21 are currently pending in this application.

***Claim Objections***

Claim 15 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The claim is dependent on claim 2, which is a cancelled claim. For the purpose of further prosecution, the claim will be considered dependent from claim 1.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 11-13 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 11 is directed towards a network

manager, it is clear from the specification (§182) that the network manager is a software application. Software applications are not patentable subject matter so the claim is directed towards non-patentable subject matter.

Claims 1, 4-10, 14-21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The method claims result in no transformation of an article from one state to another, nor is the claimed method steps tied to a particular machine. The limitation of a "computer-implemented method" is a mere field-of-use limitation and does not make the claimed method statutory.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-3, 5-6, 8, 11, and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doshi (6130875) in view of Kodialam (2002/0067693).**

**Regarding claims 1 and 11,** Doshi teaches a method for determining primary and restoration paths for a new service in a mesh network having a plurality of nodes interconnected by a plurality of links (Abstract), the method comprising:

for each of a plurality of candidate path pairs for the new service, each candidate path pair comprising a candidate primary path and a candidate restoration path for the new service (Column 23, lines 55 – 64), generating a path cost associated with said

each candidate path pair, wherein the path cost for a candidate path pair is a function of sharability of one or more links within the corresponding candidate restoration path (Column 25, lines 30 – 38); and

selecting the primary and restoration paths for the new service from the plurality of candidate path pairs based on the path cost of each candidate path pair (Column 27, lines 26 – 41).

Doshi does not explicitly indicate that the link cost is a function of the sharability of different corresponding links, wherein the sharability of the corresponding link corresponds to the ability of the corresponding link to reserve protection bandwidth that is shared between restoration paths of two or more primary paths.

Doshi does not explicitly indicate wherein generating the path cost for each candidate path pair comprises: generating a link cost associated with each link in the corresponding candidate restoration path; and generating the path cost as a function of a sum of the link costs for all links in the candidate restoration path.

Doshi does not explicitly indicate that, for each link, generating the link cost comprises: determining whether sharing is available on the link; and if sharing is available, then generating the link cost as a function of a sharing degree for the link; wherein the sharing degree is the maximum number of additional unit-bandwidth primary services that can be added to the candidate primary path without increasing restoration bandwidth reserved on a link.

Kodialam teaches a system of provisioning primary and backup paths (§27) that includes determining active link capacity based on the sharing ability of the links, where

the sharing ability is determined in part by the amount of reserved bandwidth along backup paths (§30). Kodialam teaches wherein generating the path cost for each candidate path pair comprises: generating a link cost associated with each link in the corresponding candidate restoration path; and generating the path cost as a function of a sum of the link costs for all links in the candidate restoration path (§56). Kodialam teaches a system of provisioning primary and backup paths (§27) that includes determining active link capacity based on the sharing ability of the links, where the sharing ability is determined in part by the amount of reserved bandwidth along backup paths and is concerned with how much additional unit bandwidth services can be added with respect to both primary and backup paths already traversed along that link (§30).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Kodialam's teaching of overbooking reserved bandwidth for backup paths in Doshi's invention to allow more optimal use of bandwidth capacity in a network.

**Regarding claim 3, Doshi teaches the invention of claim 2.**

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Kodialam's teaching of overbooking reserved bandwidth for backup paths in Doshi's invention to allow more optimal use of bandwidth capacity in a network.

**Regarding claim 5**, Doshi teaches the invention of claim 3, wherein the link cost is also generated as a function of an administrative weight for the link (Column 35, lines 19 – 24).

**Regarding claim 6**, Doshi teaches the invention of claim 3, wherein the link cost is also generated as a function of a form of a sharing degree (Column 23, under FC header in the table, where FC takes into account capacity that has been reserved for restoration path as free capacity is increased).

**Regarding claim 8**, Doshi teaches the invention of claim 1, wherein the sharability of a link in a candidate restoration path is represented by a sharing degree for the link, wherein the sharing degree is a maximum number of additional unit-bandwidth primary services that can be added to the candidate primary path without increasing restoration bandwidth reserved on the link (Column 23, under FC header in the table, where FC takes into account capacity that has been reserved for restoration path as free capacity is increased).

**Regarding claim 13**, Doshi teaches the invention of claim 11, wherein the network manager is located at a single node of the network (Figure 6, element 54).

**Regarding claim 14**, Doshi teaches the invention of claim 1.

Doshi does not explicitly indicate wherein the path cost is independent of the sharability of any link within the corresponding candidate primary path.

Kodialam teaches wherein the path cost is independent of the sharability of any link within the corresponding candidate primary path (¶56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Kodialam's teaching of overbooking reserved bandwidth for backup paths in Doshi's invention to allow more optimal use of bandwidth capacity in a network.

**Regarding claim 15**, Doshi teaches the invention of claim 2, wherein the candidate restoration path comprises at least two links (Table in Column 23, under the G function, this shows that it travels all the links of all the possible routes between the two points in the network, thus ensure each route can have at least two links).

**Regarding claim 19**, see the rationale of the rejection to claim 8.

**Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Doshi in view of Kodialam, and in further view of examiner's official notice.**

**Regarding claim 12**, Doshi teaches the invention of claim 11.

Doshi does not explicitly indicate wherein the network manager is distributed over the network.

Examiner takes Official Notice (see MPEP § 2144.03) that "the central manager in Doshi can be distributed over the network in order to provide redundancy or load balancing in the network". The Applicant is entitled to traverse any/all official notice taken in this action according to MPEP § 2144.03, namely, "if applicant traverses such an assertion, the examiner should cite a reference in support of his or her position". However, MPEP § 2144.03 further states "See also *In re Boon*, 439 F.2d 724, 169 USPQ 231 (CCPA 1971) (a challenge to the taking of judicial notice must contain



adequate information or argument to create on its face a reasonable doubt regarding the circumstances justifying the judicial notice)." Specifically, In re Boon, 169 USPQ 231, 234 states "as we held in Ahlert, an applicant must be given the opportunity to challenge either the correctness of the fact asserted or the notoriety or repute of the reference cited in support of the assertion. We did not mean to imply by this statement that a bald challenge, with nothing more, would be all that was needed". Further note that 37 CFR § 1.671(c)(3) states "Judicial notice means official notice". Thus, a traversal by the Applicant that is merely "a bald challenge, with nothing more" will be given very little weight.

### ***Response to Arguments***

Applicant's arguments filed December 3, 2008 have been fully considered but they are not persuasive.

The applicant argues the §101 rejection to claim 11 is improper because a network manager cannot be interpreted as software per se. The examiner disagrees, as the applicant noted (see pg 9 of remarks) the specification discloses one at least embodiment of the network manager is implemented in part in software. The claim limitation recites that the network manager is adapted to perform the listed steps. The claim is directed towards the software functional implementation of any "network manager" as disclosed by the specification. There are no limitations in claim 11, which limit the network manager to its hardware embodiments, leaving the claim directed towards embodiments where the network manager is implemented in software.

Because the specification makes it clear that the network manager appears to be the term of the application that is run on nodes in the network, and the claim is directed towards only the application aspect of the network manager, then the claim is directed towards the software application per se, which is non-statutory subject matter.

Regarding claim 1, 8, and 19, the applicant argues that Kodialam, does not disclose the term "maximum" which as result does not teach the limitation of "maximum number of additional unit-bandwidth primary services that can be added to the candidate primary path without increasing restoration bandwidth reserved on a link. The examiner disagrees, Kodialam, in ¶130, teaches that the system must determine the sharing ability of the link, and that determination is made based a function of the available sharing capacity considering the bandwidth currently used for active and backup paths along the link. It is clear that in determining the remaining ability of the link to reserve additional paths, that ability is derived from the maximum remaining capacity of the link in light of the sharing function, which is the same idea of determining the "maximum" additional space on the link that still can be assigned to primary and backup services as recited in the claim.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN BATES whose telephone number is (571) 272-3980. The examiner can normally be reached on 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on (571) 272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin Bates/  
Primary Examiner, Art Unit 2456